Contributors to This Issue

Peter K. Bohacek, B.E., 1958, M.Eng., 1959, Ph.D. (electrical engineering), 1963, Yale University; Ford postdoctoral fellow and assistant professor of electrical engineering, Massachusetts Institute of Technology, 1962–1964; Bell Laboratories, 1964—. At the Massachusetts Institute of Technology, Mr. Bohacek worked on signal detection. At Bell Laboratories, he worked on signal processing, system design, development and testing of phased array radar systems. Since 1974 he has been head of the Toll Switching Engineering Department where he has been involved in system design of toll switching systems. Member, IEEE, Sigma Xi, Tau Beta Pi.

Joseph S. Colson, Jr., B.S.E.E., 1968, North Carolina State University; M.S.E.E., 1969, Stanford University; Bell Telephone Laboratories, 1968—. At Bell Laboratories, Mr. Colson first worked on the design of missile guidance circuits for the Safeguard system. He has supervised groups responsible for CCIS frame evaluation, maintenance and billing circuit design, and CCIS data link terminal design. He presently supervises a group responsible for the design of CCIS programs for No. 1 and No. 1A ESS local offices. Member, Phi Kappa Phi, Tau Beta Pi, Eta Kappa Nu, Phi Eta Sigma.

Kenneth E. Crawford, B.S.E.E., 1964, Pennsylvania State University; M.S.E.E., 1966, Ohio State University; Bell Laboratories, 1964—. Mr. Crawford worked initially on maintenance program development for the electronic translation system. He later supervised a group responsible for the development of laboratory test facilities. He presently supervises a group responsible for call processing program development. Member, Tau Beta Pi, Eta Kappa Nu, Sigma Tau.

Lance M. Croxall, B.S.E.E., 1965, M.S.E.E., 1966, Purdue University; Bell Telephone Laboratories 1966—. Mr. Croxall was initially responsible for the development of the network management programs for the Electronic Translator System for 4A crossbar. He later supervised groups responsible for operational program development for No. 4 ESS, including input/output, traffic measurements, and CCIS. He currently

supervises a group responsible for international call handling features for No. 4 ESS. Member, Tau Beta Pi, Eta Kappa Nu.

Carl A. Dahlbom, B.E.E., 1941, Polytechnic Institute of Brooklyn; Bell Laboratories, 1930–1977. Mr. Dahlbom was first engaged in transmission and circuit development in the Telegraph Department. During World War II he was involved in the development of military telegraph systems, speech secrecy systems, and tube modulators for radar systems. After the war he was engaged in design and development of single and multifrequency signaling systems. In 1954 he became responsible for signaling systems engineering studies as well as planning for both domestic and worldwide communications systems. He participated in studies of international signaling systems as a member of the International Telegraph and Telephone Consultative Committee (CCITT) which led to the implementation of customer dialing of international calls (IDDD). In 1960 he became head of the Signaling Systems Engineering Department and was responsible for signaling studies and more recently studies leading to the introduction of Common Channel Interoffice Signaling (CCIS) in early 1976. He retired in early 1977 and is currently a consultant for signaling engineering studies. Senior member, IEEE.

Charles J. Funk, AT&T, 1943–1959; Bell Telephone Laboratories, 1959—. Mr. Funk was initially engaged in common control circuit development to increase the capacity of the No. 4 Toll Crossbar Switching System. He then participated in the system planning for the addition of the Electronic Translator System (ETS) to the No. 4 system and designed the decoder channel circuit and related marker and connected changes. Since then he has supervised a group responsible for No. 4 switching circuit design. His group was responsible for system planning and design of all new and modified 4A switching hardware for the CCIS development.

A. L. Kalro, B.Tech. (Mech. Eng.), 1965, Indian Institute of Technology—Bombay; M.S.I.E., 1967, Illinois Institute of Technology—Chicago; Ph.D., 1971, University of California—Berkeley; Bell Laboratories, 1972—. Mr. Kalro has worked on systems engineering for toll CCIS and on electromechanical toll switching system replacement economics. In 1977, he was appointed supervisor of a group responsible for conducting exploratory traffic studies and developing algorithms and software for the design of private networks.

Baylen Kaskey, BSME 1950, University of Pennsylvania; Kansas State College 1950–1951; Bell Telephone Laboratories, 1951–1962; Bellcomm, Inc., 1962–1967; Bell Telephone Laboratories, 1967—. At Bell Laboratories, Mr. Kaskey first worked on the design of military system components. He supervised a group responsible for the airborne guidance hardware for the Nike missile systems. At Bellcomm, Inc., Mr. Kaskey headed a department responsible for the systems engineering of the Apollo flight missions for the National Aeronautics and Space Administration. After Mr. Kaskey returned to Bell Laboratories he first headed a department responsible for physical design and computer applications in telephone switching systems. He presently heads a department responsible for circuit and physical design of operations support systems for telephone systems. Mr. Kaskey is a member of Tau Beta Pi, American Institute of Aeronautics and Astronautics, American Society of Mechanical Engineers, and the American Management Association.

Randolph S. Little, B.E.E., 1963, Cornell University; M.S. (E.E.), 1966, The Ohio State University; Bell Laboratories, 1963—. Mr. Little has supervised groups in the development of hardware, software and procedures for maintenance, growth and modification of No. 4-type crossbar switching systems. Initially he was engaged in development of the piggyback twistor memory system, and is currently involved in Common Channel Interoffice Signaling implementation. Senior member, IEEE; life member, AOU.

Joseph E. Massery, B.S., 1970, and M.S.E.E., 1972, Rensselaer Polytechnic Institute; Bell Laboratories, 1972—. Mr. Massery has been engaged in various aspects of the development of common channel interoffice signaling for toll crossbar, including software design, and hardware and software testing. He currently supervises a group responsible for software testing and evaluation. Member IEEE.

James Z. Menard, B.S. (physical science), Arkansas State Teachers College, 1941; Bell Telephone Laboratories 1946–1965; Bellcomm 1965–1971; Bell Laboratories 1971—. Mr. Menard's early work at Bell Laboratories, following military service with the Signal Corps, was on magnetic recording systems for voice announcement services, and later, on the development of military sonar systems for Project Caesar and Project Jezebel. At Bellcomm, which carried out systems engineering work for the Apollo program, he was director of the Systems Configuration Division. Since his return to Bell Laboratories he has been the

director of the Toll Crossbar Switching Laboratory which has been engaged in the development of Common Channel Interoffice Signaling.

Paul R. Miller, B.S.E.E., 1962, University of Detroit; M.S.E.E., 1965, Ohio State University; Bell Laboratories, 1962—. Since starting at Bell Laboratories, Mr. Miller has been associated with the design of electronic switching. The work includes circuit and program design for the 4A Electronic Translator System, and more recently the Common Channel Interoffice Signaling System. Mr. Miller is currently supervisor of the STP System Design Group in Columbus, Ohio.

Richard F. Mills, B.E.E., 1958, M.S.E.E., 1961, Ohio State University; Bell Telephone Laboratories, 1958—. He was a member of the Switching Apparatus Laboratory where he was engaged in miniature relay developments. In 1969, Mr. Mills joined the Toll Crossbar Switching Laboratory for development work on an electronic translator and a peripheral minicomputer for addition to the 4A Toll Switching machine and on a data terminal for Common Channel Interoffice Signaling. At present, he is supervisor of the Terminal Physical Design Group. Member, Tau Beta Pi, Eta Kappa Nu, and P.E., State of Ohio.

Frank H. Myers, B.S.M.E., 1958, M.S.E.E., 1960, Ohio University; Bell Telephone Laboratories, 1960—. Initially Mr. Myers participated in the design of the switching network and crosspoint for No. 1 ESS. He then supervised the development of electronic circuits for switching systems, including the piggyback twistor store and the Common Channel Interoffice Signaling terminal frame. He currently supervises the group responsible for developing the common channel signaling interface hardware for Autosevocom. Senior member, IEEE.

Gerald A. Raack, B.S. (Math), 1967, Ohio State University; M.S. (Computer Science), 1968, Purdue University; Bell Laboratories, 1967—. Mr. Raack's first assignment concerned analysis of automatic message accounting requirements during the No. 5 crossbar system modernization study. He then did program development in a computer system utilities group and was responsible for portions of the SWAP assembler and LAMP systems. He is currently supervisor of the Computer System Utilities and Traffic Engineering Group in Columbus which is responsible for the

support software and traffic engineering for the No. 4A crossbar ETS/CCIS/STP systems.

James T. Raleigh, B.S., 1957, Pennsylvania State University; Bell Telephone Laboratories, 1957–1962; Bellcomm, Inc., 1962–1972; Bell Telephone Laboratories, 1972—. Mr. Raleigh started at Bell Laboratories with work on crystal controller frequency standards for central office transmission test equipment. His work in Bellcomm, Inc. systems engineering and analysis related to the command systems in the lunar landing program. Upon his return to Bell Labs he supervised a group working on usage and application information for switched special services, prior to assuming responsibility for test position circuit development for toll and special services application. Member, Tau Beta Phi, Sigma Tau.

A. E. Ritchie, A.B. 1935, M.A. 1937 (physics), Dartmouth College; Bell Laboratories, 1937—. His initial work was in designing crossbar switching systems and in organizing courses, writing texts, and teaching in the fields of radar, switching circuits, and system design. Since 1951, his assignments have been in systems engineering and fundamental planning in the telephone switching field. He became director of Switching Systems Engineering in 1958 and, when responsibilities were divided in 1965, director of Toll Switching Engineering. This position includes responsibility for planning studies leading to new toll switching systems such as No. 4 ESS, and planning for development and implementation of new signaling systems, notably Common Channel Interoffice Signaling. Senior member, IEEE.

John S. Ryan, New York Telephone Co., 1945–1961; Bell Laboratories 1961—. At Bell Laboratories Mr. Ryan has supervised a group which was at various times responsible for requirements for dc, PCM, single-frequency, multifrequency, common channel, and international signaling systems. An AT&T representative in the CCITT since 1964, he chaired CCITT Working Groups responsible for design and specification of signaling system No. 6 fron 1965 to 1969. He was made chairman of Study Group XI, which is responsible for telephone switching and signaling by the CCITT Plenary Assembly, Geneva, 1972, and was reappointed in 1976. He is currently supervisor, international switching and signaling.

Arthur F. Schweizer, Bell Laboratories, Inc. 1934—. Mr. Schweizer was initially concerned with the trial installation of telephone and military projects, laboratory testing of crossbar circuits and equipment design for the No. 1 Automatic Message Accounting center and crossbar systems. Since 1963, he has supervised a group responsible for the physical design of various equipment in No. 4A toll crossbar, crossbar tandem, and message billing systems.

James D. Sipes, B.E.E., 1965, and M.S.E.E., 1966, Ohio State University; Bell Telephone Laboratories, 1966—. Mr. Sipes was initially involved in various studies of modernization of the 4A toll crossbar system. He worked in development of maintenance software and system integration for the Electronic Translator System (ETS) for the 4A, and supervised a group responsible for ETS electronic hardware and field support. During the 4A/CCIS development, he supervised a group responsible for the design of the call processing software. Mr. Sipes is currently on a two-year rotational assignment as a district staff manager with Pacific Telephone. Member, IEEE, Tau Beta Pi, Eta Kappa Nu.

Ronald C. Snare, B.S.E.E., 1962, Pennsylvania State University; M.S.E.E., 1965, Ohio State University; Bell Laboratories, 1962—. Between 1962 and 1965 Mr. Snare was engaged in the circuit design of the SPC No. 1A memory store frames and was awarded three patents relating to that work. From 1965 to 1969 he developed call processing software for the No. 4 crossbar Electronic Translator System (ETS). Since 1969 Mr. Snare has supervised groups which developed software for new ETS features, addition of new equipment to in-service ETS offices, the Integrated Data Management System (IDMS) compiler for the Common Channel Interoffice Signaling (CCIS) data base, and a minicomputer adjunct (peripheral bus computer) to the No. 4 crossbar ETS. He is currently supervisor of a group responsible for both the hardware and software design of new features for the peripheral minicomputer systems used in No. 4 crossbar switching offices equipped with ETS or CCIS and in CCIS signal transfer point offices. Member, IEEE, Tau Beta Pi, Sigma Xi, Eta Kappa Nu.

Roger E. Stone, B.S. (physics), 1959, Siena College; Western Electric Company, 1960–1965; Mountain Bell Telephone Company, 1966–1967; Bell Laboratories, 1968—. At Western Electric, Mr. Stone was involved in writing test programs and testing procedures for computerized defense

systems. Later he worked on the No. 1 ESS AUTOVON system development. At Mountain Bell, Mr. Stone was responsible for managing a message switching operation. At Bell Laboratories, Mr. Stone developed the add-on-conference and network management programs for the No. 1 ESS AUTOVON system. He later was involved in the development of the CCIS call programs for No. 4 ESS. Presently Mr. Stone is developing the International Revenue Settlement system for the No. 4 ESS gateway generic.

Richard A. Tauson, B.S. Physics, 1959, M.S.E.E., 1960, Ph.D.E.E., 1963, Carnegie Institute of Tecbnology; Bell Telephone Laboratories, 1965–1969; American Telephone and Telegraph Co., 1970–1971; Bell Telephone Laboratories, 1972—. At Bell Laboratories Mr. Tauson first worked on the design of tactical doctrine of the Safeguard system. He has since worked in data set development and transmission maintenance. He presently supervises a group responsible for design of the Trunk and Facilities Maintenance System (TFMS). Member, Phi Kappa Phi, Eta Kappa Nu, Sigma Xi.

L. A. Tomko, B.S., 1966, Oklahoma State University; M.S., 1967, Ph.D., 1971, University of Illinois; Bell Laboratories, 1970—. Mr. Tomko has been engaged in toll switching system exploratory studies and common channel interoffice signaling implementation. He is presently supervisor of the Toll Data Features Group, concerned with planning for data services on toll electronic switching systems. Member, IEEE.

R. E. Wallace, B.S.E.E., 1965, Northeastern University; M.S.E.E., 1967, Ohio State University; Bell Laboratories, 1965—. Mr. Wallace has worked on a variety of systems studies and development projects in the areas of digital circuit design and maintenance software. He was responsible for the circuit design and diagnostic programs for the CCIS terminal. He presently supervises a group responsible for development of trouble locating manuals for the CCIS circuits and for development of the digital switching and signaling circuits for AUTOSEVOCOM II. Member of Tau Beta Pi.